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AUTHOR Walters, Donald L.
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ABSTRACT

This paper presents findings of a study that examined the effect of a Pennsylvania subsidy formula on expenditures per pupil in the state's public school districts. The Equalized Subsidy for Basic Education (ESBE) was adopted in 1983 as a system to equalize resources among school districts. Out of 500 operating Pennsylvania school districts, 25 districts with the highest expenditures per pupil were compared with the 25 lowest-expenditure districts. District expenditures, revenues, wealth and efforts, and characteristics were examined. An examination of the ratio of expenditures to average daily membership (ADM) reveals no lessening of difference across 7 years (1984-85 through 1990-91) of the ESBE formula. Based on the 1990-91 data, the highest 25 districts had higher expenditures per student and for instruction, greater federal revenue, increasing wealth per ADM, and greater local effort. Of the 20 districts in the low 25, only 5 would qualify for aid under the governor's criteria for supplementing the ESBE appropriation. Overall, the ESBE formula appears to have failed to reduce the inequalities on the selected fiscal variables. A significant increase in state subsidy would be required to reverse the situation. Finally, the meaning of inequity must be assessed in terms of a value system or set of priorities. A glossary and four tables are included. Appendices contain three figures and information on the ESBE. (Contains 17 references.) (LMI)

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THE EQUALIZED FORMULA IN PENNSYLVANIA SCHOOL FINANCE
A MULTI-YEAR PERSPECTIVE

Donald L. Walters

American Educational Research Association

Atlanta, Georgia

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THE EQUALIZED FORMULA IN PENNSYLVANIA SCHOOL FINANCE

MULTI-YEAR PERSPECTIVE

Objectives

Debate about the method of financing public schools in Pennsylvania has been intensified by allegations of the failure of the state to address serious inequalities in resources among districts. The major question of this study is: Under a state subsidy formula designed to equalize resources, have differences in expenditures per pupil in Pennsylvania public school districts become greater or lesser?

Secondary questions include:

1. In what ways do revenue patterns differ between high spending and low spending districts?

2. To what degree are differences in expenditures associated with differences in local wealth and effort?

3. Does size or location of district relate to differences in expenditures?

Perspective

How states distribute funds for public education continues in controversy and as a focus for legal action. The first two months of 1993 witnessed major events in three states. The headlines in the press read:

"Judge in Missouri Strikes the State's Finance Formula"

Education Week, Jan. 27, 1993

"School-Finance Laws Are Unconstitutional, N.D. Judge Decrees"
Education Week, Feb. 17, 1993

"Texas to Hold Referendum On School-Aid Shift to Poor"
New York Times, Feb. 16, 1993

In Missouri, a circuit judge described the state's school finance system as "overly complex" and "irrational," producing "one of the most disparate situations of any state." Per pupil expenditures among the state's districts were cited as ranging from $9,750 to $2,653 (a ratio of 3.68:1). "Those disparities are not because of differing student needs, but instead are associated with local property wealth or are simply irrational, "the judge concluded.[1]

In North Dakota, a district judge found that the school finance system "arbitrarily and irrationally denies equal educational opportunities to children in low-wealth districts." The state was seen to violate its constitutional requirement to provide a "uniform system of free public schools throughout the state" by relying heavily on districts having "vastly different" amounts of wealth to bear the cost of education. The court ruled that the disparities between the funding abilities of school districts were not offset or equalized by the state.[2]

Twenty-five years of dispute over school finance in Texas led to the legislature approving an amendment to the state's constitution in February, 1993. The amendment would permit the legislature to shift 2.75 percent of all state and local school

revenue from districts having high property wealth to poor ones. An independent study reported that expenditures per pupil on the five percent of students in the richest districts averaged $11,801 against $3,190 for the five percent of students in the poorest districts (a ratio of 3.70:1). This effort to seek a remedy by constitutional amendment followed many unsuccessful attempts to achieve judicial approval of legislative acts. Next, the amendment must be voted upon in a special election set for May 1, 1993.[3]

In the 1980's, court cases on school finance often emphasized the difference in spending at the opposite ends of the continuum in a state. In Texas, differences in spending between the bottom 50 and the top 50 districts influenced the court's decision. In New Jersey, the court ordered that the funding per pupil in the bottom districts (the poorest 28) be made substantially equivalent to the top districts (the 109 wealthiest).[4] Likewise, the strategy of the plaintiffs in West Virginia was on "a worse case scenario rather than on the variance . . . that existed among the state's fifty-five school districts."[5]

The Pennsylvania Story

In 1983, Pennsylvania adopted a state subsidy formula for local school districts (ACT 73) which continues in place today. The formula, named the "Equalized Subsidy for Basic Education" (ESBE), was first implemented in fiscal year 1983-84. At the same time, work was underway to change the accounting system. This new system was introduced statewide in 1984-85.

Each year following 1983, the legislature amended the ESBE formula by changing the dollar amount of the factor for educational expense (FEE) and by adding provisions to supplement the base subsidy. (In its title, "Basic Education" refers to K-12 schooling, not a minimal educational program.) The formula, however, continues to be driven by the number of students in the district, the district's wealth, its incidence of student poverty, its local effort to fund education, and the population of the district. These factors are the determiners of the overwhelming amount of funds distributed by the Commonwealth to "equalize" differences among the districts. (See Appendix.)

The debate on Pennsylvania's school finance system intensified with the filing in January 1991 of a class action suit in the Commonwealth Court of Pennsylvania. The Pennsylvania Association of Rural and Small Schools (PARSS) was joined by individual school districts and students in suing the governor and secretary of education in what is known as PARSS et al. vs. Casey. The complaint alleges that Pennsylvania's method of funding instructional expenses in public schools is unconstitutional because it violates the education clause of the Pennsylvania Constitution, the right to equal protection of the laws guaranteed by the Pennsylvania Constitution, and the Fourteenth Amendment to the United States Constitution.

Studies of Pennsylvania school finance during the 1980's revealed significant disparities. When the sixteen districts that

had the highest actual instruction expense per student were compared to the sixteen lowest districts in 1982, the gap across each year through 1988 was found to be large and persistent.[6] Moreover, when the 100 richest and 100 poorest districts were compared between 1985 and 1989, state funding increased more for the rich (42%) than for the poor (36%). And, even though local revenues also increased more for the rich (37% vs. 22%), local tax effort for the rich decreased 5% while it increased 6% for the poor.[7]

In 1986-87, Pennsylvania ranked fourth in school spending disparities nationally, when the ten highest-spending districts were compared to the ten lowest-spending districts. Only Texas, Ohio, and New York had greater disparity ratios.[8]

In observing that local wealth varies widely across Pennsylvania, the Center for Rural Pennsylvania found, "Over 90 percent of all rural districts can be classified as poor because they are below the state average in wealth available per student."[9] At the same time, the Center contended that poor schools were exerting a greater effort than were wealthy schools while finding that fewer of their own high school seniors planned to pursue postsecondary education.[10]

In his budget address to the legislature on February 9, 1993, the governor admitted frankly, "Our current subsidy system hasn't closed the gap. The richest districts are still spending almost three times as much as the poorest districts."[11] He went on to propose $100 million as an equity supplement to aid low spending

school districts or to aid school districts with a higher percentage of students from low-income families. This sum, which represents about two percent of the total budget for basic education, is projected to benefit 228 of Pennsylvania's 501 school districts. Districts which do not qualify for the new equity funding will find their ESBE amounts frozen at 1992-93 levels. (The legislature is not expected to adopt the budget for 1993-94 prior to late June 1993, the end of the current fiscal year.

Method

Financial and enrollment data were extracted from reports compiled and issued by the Pennsylvania Department of Education.[12] These data covered fiscal years 1984-85 through 1990-91. Market values of real property were those determined by the Pennsylvania State Tax Equalization Board.

An ex post facto design comparing those districts with the highest expenditures per pupil to those with the lowest was constructed. This approach may be described as the "extreme groups method."[13] The "maxmincon" principle[14] whereby maximum variance or contrast is sought between groups on the independent variable also underlies this design.

In the distribution of districts by total expenditures per average daily membership (Exp/ADM), the highest 5 percent and the lowest 5 percent were selected. Based on the 500 operating school districts in Pennsylvania, this process yielded the 25 highest spending districts (Hi-25) and the 25 lowest spending districts

(Lo-25). (One non-operating district was eliminated from the total distribution of 501 districts.) If a district had unusually high expenditures for Other Uses which inflated its Exp/ADM, that district was removed from the analysis. (An example of an extraordinary Other Use is the retirement of a bond issue through refinancing.)

The process for selecting the comparison groups is distinct from calculations based on the restricted range (the difference between the 5th and 95th percentiles) and from the Federal range ratio (the restricted range divided by the 5th percentile).[15] Among the districts selected for this study, the last one in the Hi-25 is at the 95th percentile on Exp/ADM and the first one in the Lo-25 is at the 5th percentile.

To mitigate the problem of differing ADM's among the districts, district means were not used. The individual student, not the district, was selected as the unit of analysis.[16] Therefore, for each group of districts, the total number of ADM's and the total sum of dollar amounts on fiscal variables were calculated. Means and percentages derived from these totals represent group values, not district values.

Differences between groups were analyzed by comparing relative distributions and by computing ratios. The value for the higher Exp/ADM group was used as the numerator; the value for the lower Exp/ADM group, as the denominator. The process followed the

"winners-and-losers" ratio design. (For definitions of terms, please see the Glossary following the Notes.)

Results

Expenditures

For total expenditures in the general fund, the ratio between the Hi-25 and Lo-25 was consistently greater than 2.10 (see Table 1). (All ratios were computed in relation to 1, i.e., 2.10:1. For brevity, the "1" is omitted from this section of the report.) The ratios in the last two years repeated the first two years at 2.13 and 2.12, respectively. The extreme between the districts ranking 1st and 500th yielded ratios from 2.92 to 3.19; in six of the seven years the ratios were greater than 3.00.

When the districts at the 95th percentile and the 5th percentile were compared, the ratio ranged from 1.80 to 1.86. The ratio during each of the last three years was greater than during the first three years. The federal range ratio fell between .796 and .884. This ratio increased across the first four years then decreased across the last three years.

For horizontal equity, the ratios between the comparison groups should equal 1.00. For this objective, the federal range ratio should approach zero (0.00). These ratios permit the tracking of increases or decreases in dispersion of equity over time without having to adjust for inflation.

When limited to Actual Instruction Expense (AIE), the ratio between the Hi-25 and Lo-25 was slightly lower than for total

expenditures. For five of the seven years, this ratio fell between 2.04 and 2.06; for two years it exceeded 2.10. The ratio between the 1st and 500th ranking districts ranged from 2.57 to 3.44 it was at least 3.00 in four of the seven years.

The ratio for AIE/ADM between the 95th and 5th percentiles was more variable than for the Hi-25/Lo-25 comparisons. With the exception of a large spurt in 1985-86, the general trend across the seven years was for this ratio to increase. A similar pattern was evident for the federal range ratios.

Table 1. Expenditures

	Fiscal Year						
	84-85	85-86	86-87	87-88	88-89	89-90	90-91
Exp/ADM							
1st/500th	3.19	2.92	3.07	3.16	3.19	3.02	3.05
Hi25/Lo25	2.13	2.12	2.15	2.21	2.19	2.13	2.12
95%/5%	1.80	1.80	1.81	1.84	1.86	1.84	1.84
Fed Range Ratio	.796	.804	.813	.884	.865	.838	.836
AIE/ADM							
1st/500th	3.44	3.00	2.62	2.57	2.73	3.09	3.07
Hi25/Lo25	2.04	2.05	2.13	2.12	2.06	2.06	2.06
95%/5%	1.63	2.15	1.64	1.78	1.82	1.84	2.16
Fed Range Ratio	.631	1.15	.646	.776	.820	.841	1.16

Revenue

The ratio between the Hi-25 and Lo-25 on local revenue tended, in general, to increase (see Table 2). From 3.50 in 1984-85, it rose to 4.11 in 1990-91. During the same period, the ratio for state revenue tended to decrease. In 1984-85 the Hi-25 received 90 percent as much state revenue per ADM as did the Lo-25; by 1990-91, this amount was 72 percent. These ratios indicate that the Lo-25 received a larger share of state revenue as time progressed across the seven years. When local and state revenue were combined, the ratio tended to hover around 2.00.

The ratio for federal revenue rose across the first three years but decreased from 1986-87 (a high of 2.51) through 1990-91 (a low of 1.35). In each year, the Hi-25 received more federal revenue per ADM than did the Lo-25. The ratio for total local, state, and federal revenue tended to remain at 2.00 in favor of the Hi-25.

The percentage mix of revenue by source for the Hi-25 tended to remain 75-22-3 across the seven years. In the last two years, the percentage of revenue from local sources tended to increase while the percentage from state and federal sources decreased. The Lo-25 experienced a pronounced change in revenue mix. From 46-52-3 in 1984-85, it shifted to 37-59-4 by 1990-91.

Table 2. Revenue

	Fiscal Year						
	84-85	85-86	86-87	87-88	88-89	89-90	90-91
Rev/ADM							
Hi25/Lo25							
Local	3.50	3.51	3.59	4.12	3.92	3.92	4.11
State	.90	.82	.86	.82	.78	.69	.72
L + S	2.12	2.02	2.08	2.15	2.05	1.93	2.03
Federal	2.14	2.26	2.51	1.74	1.58	1.50	1.35
Total	2.12	2.02	2.09	2.14	2.03	1.91	2.00
Percent by							
Local							
Hi 25	75.4	75.1	74.7	75.3	75.2	75.9	76.2
Lo 25	45.6	43.3	43.4	39.0	39.0	37.0	37.1
State							
Hi 25	21.8	22.0	22.3	22.2	22.2	21.7	21.3
Lo 25	51.6	54.1	54.1	57.9	57.7	59.9	59.1
Federal							
Hi 25	2.8	2.9	3.0	2.5	2.6	2.4	2.5
Lo 25	2.8	2.6	2.5	3.1	3.3	3.1	3.8

Wealth and Effort

When wealth is measured by the estimated market value of real property, the Hi-25 were found to account for approximately 14% of the entire wealth of Pennsylvania. In contrast, the Lo-25 accounted for about 2% of the state's wealth. The disparity in wealth, as reflected in the ratios for market value per ADM, increased fairly steadily across the seven years from 2.69 to 4.06 (see Table 3).

Although districts tax the assessed value rather than the market value of real property, the latter measure is a factor used by Pennsylvania in calculating the aid ratio used in the ESBE formula. The importance of real property to the revenue raised by districts is reflected in the fact that it produces, on average, 78% of local tax revenue.

Table 3. Wealth and Effort

	Fiscal Year						
	84-85	85-86	86-87	87-88	88-89	89-90	90-91
Wealth (Market Value)							
Percent of State							
Hi 25	13.7%	14.3%	13.7%	14.0%	14.8%	14.1%	14.1%
Lo 25	2.3%	2.4%	2.4%	2.0%	2.2%	1.8%	1.8%
Ratio*	2.69	2.80	2.79	3.22	3.48	3.92	4.06
Effort (Equalized Mills)							
State EM	22.9	23.2	21.7	22.5	21.2	22.2	20.8
Hi 25	23.9	23.5	22.2	22.5	20.4	20.5	19.0
Lo 25	18.4	18.8	17.3	17.6	18.1	20.5	18.7
Ratio	1.30	1.25	1.28	1.28	1.13	1.00	1.02

* The ratio was computed on the basis of Market Value per ADM for the Hi-25 and Lo-25 groups, respectively.

With market value as an estimate of local ability to support education, the effort of the district may be computed by comparing the revenue raised locally to its market value. In Table 3, this comparison is expressed as a millage rate. The ratio, then, is the relationship between the millage rates for the Hi-25 and Lo-25.

Lo-25 in all seven years. The trend, however, was one of decreasing ratios. In comparison to the millage rate for the state as a whole, the Hi-25 exceeded the state effort during the first three years, equaled it in the fourth, and was below it during the last three years. The Lo-25 remained below the statewide effort level in all seven years.

School District Characteristics

In general, the Hi-25 (5% of the districts) accounted for 7% of the students (ADM) statewide (see Table 4). This percentage fell slightly below 7% during the last two years. The Lo-25 (also 5% of the districts) accounted for about 3.5% of the state's ADM. Throughout the seven years, the Hi-25 tended to account for about twice as many students as did the Lo-25. The state's second largest district, Pittsburgh, was in the Hi-25 each year. Pittsburgh had an average of 37,700 ADMs; otherwise, no school district in either group had more than 10,000 ADMs.

In 1990-91, the Hi-25 averaged 4,483 ADMs per district. Without Pittsburgh, the average was 3,029 ADMs. The Lo-25 averaged 2,269 ADMs per district. In both groups, districts tended to range between 1,000 and 5,000 ADMs. The Hi-25 had three districts each year with less than 1,000 ADMs; 437 ADMs was the lowest. The Lo-25 averaged less than one district per year with fewer than 1,000 ADMs; the lowest was 676 ADMs.

District membership in the Hi-25 or Lo-25 is tabulated in Table 5. A total of 37 districts in six counties were in the Hi-25

one or more times across the seven years. (Pennsylvania has 67 counties.) Fifteen districts (40.5% of the 37) were in the Hi-25 every year. A total of 23 (62.2%) districts, representing five counties, were in the Hi-25 four or more of the seven years. These five included one county which contains Pittsburgh and four of its suburban districts and four counties surrounding Philadelphia.

A total of 55 districts in 28 counties were in the Lo-25 one or more times. Twenty (36.4%) of these districts, representing fourteen counties, were in the Lo-25 in four or more of the seven years. Ten of these twenty districts are in four counties which border each other in the Allegheny Mountains of southcentral Pennsylvania. Continuing through the mountains to the east-northeast, three more districts and counties may be added to make a seven-county contiguous region containing thirteen of the twenty districts in the Lo-25 in four or more of the seven years.

A four-county (non-contiguous) region in northwestern and western Pennsylvania accounted for four more districts in the Lo-25 (four or more years). Two neighboring counties in agriculturally rich southeastern Pennsylvania each accounted for one more district. The remaining district is located in a mountainous area of northeastern Pennsylvania. None of these twenty districts in the Lo-25 contained an urban center, although the largest district had 4,074 ADMs. The average ADMs for the most recent year of these twenty members in the Lo-25 was 2,214.

Table 4. Average Daily Membership

	Fiscal Year						
	84-85	85-86	86-87	87-88	88-89	89-90	90-91
Percent of State							
Hi 25	7.4%	7.6%	7.1%	7.1%	7.2%	6.9%	6.8%
Lo 25	3.3%	3.6%	3.4%	3.3%	3.8%	3.4%	3.4%
Ratio	2.21	2.12	2.06	2.13	1.92	1.99	1.98

Table 5. District Membership in the Hi-25 or Lo-25, 1984-85 through 1990-91

	Number of Districts	
Number of Years	Hi-25	Lo-25
7	15	4
6	5	3
5	2	6
4	1	7
Subtotal	23	20
3	5	10
2	2	15
1	7	10
Total	37	55

Discussion

The ratio for Expenditures/ADM, when treated as a measure of horizontal equity for students. reveals no lessening of difference across seven years (1984-84 through 1990-91) of the ESBE formula. Differences between the extremes remained greater than 3:1; differences between the Hi-25 and Lo-25 continued greater than 2:1.

Based on the data for 1990-91, a class of fifteen students in the Hi-25 had expenditures of $123,660 supporting it in contrast to $58,440 in the Lo-25, a difference of $65,220. An additional expenditure of $4,348 per ADM would have been required in order for the Lo-25 to have equaled the Hi-25. For the total number of ADMs in the Lo-25, the additional sum would have been $246.6 million.

For those expenditures more directly related to instruction, AIE, the same relationships of 3:1 and 2:1 are evident between the Hi-25 and Lo-25. In 1990-91, a class of fifteen students in the Hi-25 had AIE of $99,675 in contrast to $48,255 in the Lo-25, a difference of $51,400. An additional AIE of $3,428 per ADM, a total of $194.4 million, would have been required in order for the Lo-25 to have equaled the Hi-25.

While local revenue raised per ADM in the Hi-25 increased more than in the Lo-25, the state revenue per ADM became more favorable to the Lo-25. But, if state revenue alone were to be increased for the Lo-25 to equal the total revenue for the Hi-25, it would have needed to be increased in 1990-91 from $2,413 per ADM to $6,509 per ADM, a total of $232.3 million.

Throughout the period, the Hi-25 received more federal revenue per ADM than did the Lo-25. This source did not reduce differences in revenues between the two groups, but it did tend to become less favorable to the Hi-25.

The Hi-25 and Lo-25 demonstrated different patterns of revenue mix. The Lo-25 became increasingly more dependent on state and federal sources as local revenue declined from nearly 46 percent to 37 percent. The pattern appears to indicate that the state formula was narrowing the gap between the expenditures of the Hi-25 and the Lo-25. The expenditure ratios (Table 1), however, do not reveal that any such "narrowing" occurred. The Lo-25 evidently used increases in state revenue to offset local revenue rather than to increase total revenue for reducing the expenditure gap.

The Hi-25 show increasing wealth per ADM in contrast to the Lo-25. These districts apparently enjoy greater economic growth and are thus better able to support public schools when the state finance system relies more heavily on local than state revenues. For Pennsylvania as a whole, local revenue ranged between 56.8 percent and 59.0 percent of total local-state-federal revenue. The high of 59.0 percent occurred in the last of the seven years studied. Therefore, while the Lo-25 became more dependent on state revenues, less state revenue, in proportion to total revenue, was distributed.

In relation to their wealth (market value of real property), the Hi-25 would need to exert less effort to raise a given sum of local revenue than would the Lo-25. In contrast, the data indicate

that the Hi-25 exert greater local effort than do the Lo-25. If the Lo-25 are exerting lesser effort, does the state have a responsibility to make up the difference? Members of the Hi-25 may be expected to respond, "No!" Why are the Lo-25 exerting relatively low local effort?

On average, Hi-25 districts tend to be larger than Lo-25 districts, but more districts having fewer than 1,000 ADMs tend to be in the Hi-25 group. (Pittsburgh with 37,700 ADMs, the largest district in either group, was the only district having more than 10,000 ADMs.) Because of the variability in the Hi-25, size alone is not a strong predictor of membership in either group.

Geographical location is a strong indicator of membership in the Hi-25. These districts consistently are located in the suburban counties surrounding the state's two largest urban centers, Philadelphia and Pittsburgh. (As noted above, Pittsburgh itself is a member of the Hi-25.) The Lo-25 districts are dispersed more widely across the state but tend to occur in mountainous, rural areas. Most are in rural areas not having a rich agricultural base. No county contained both a Hi-25 and Lo-25 district.

The largest cluster of Lo-25 districts is located in or near the Allegheny Mountains within the Appalachian range; many are on the eastern slope of the physical feature called the Allegheny Front. The Allegheny Mountains are mostly covered by forests. Valleys between the ridges often contain good farmland, although the farms may be small. A few districts were in fertile agricultural mountainous or hilly areas.

The governor's proposal to supplement the ESBE appropriation by $100 million for 1993-94 would provide $93 million to 222 districts on the basis of three criteria. The district must be below average in property and income wealth, exert local tax effort at least at the state median level, and have expenditures per pupil below the state median. By having 35 percent or more of their students receiving Aid to Families with Dependent Children (AFDC), another six districts would qualify to share $4.3 million. The balance of $2.7 million would be used to assist districts that are declared financially distressed by the Department of Education.

Of the twenty districts found in the Lo-25 four or more of the seven years studied, only five would qualify for aid under the governor's criteria. Ironically, one district in the Hi-25 four or more years would qualify![17] A major factor detering more of the Lo-25 districts from qualifying is their low local tax effort. In each of the seven years, no more than five districts in this group equaled or exceeded the state's median local tax effort. The one Hi-25 district qualifying (Pittsburgh) did exceed the state's median local tax effort each year, but it would qualify for supplemental aid on the basis of its AFDCs.

The ESBE formula as funded in Pennsylvania for the years 1984-85 through 1990-91 appears not to have reduced the inequalities on the selected fiscal variables studied when considered as a whole. Significant increases in state subsidy channeled through the ESBE formula would be required to reverse the situation. What is the responsibility of districts to increase their own spending when

their local effort is low in relation to other districts? Should low spending districts be required to demonstrate greater local effort as a condition for receiving additional state subsidy?

Inequalities, in the sense of mathematical differences on fiscal indicators, should be measured and identified. Interpreting the meaning of the inequalities, however, is not so simple. The question of equity requires that the differences be assessed in terms of a value system or set of priorities.

All communities do not necessarily value education equally. What should be done about those communities which place a low value (as reflected in low local effort) on education? Are their aspirations limited because their local economy does not require highly educated persons? Should the state be absolved of reducing disparities in spending if low-spending districts do not want to spend more for their schools?

The differences in expenditures may also reflect cost differences among regions of the state. If market value per student is an acceptable measure of wealth, is it not also an indicator of the cost to live in a district? Should teachers, then, be paid higher in order to live and work in a wealthy district? To the degree that this circumstance exists, unequal expenditures do not necessarily mean inequities. (If the same brand of gasoline costs $1.50 per gallon in one town but $1.10 in another, the traveler recognizes that the difference in cost is not a difference in quality.)

Do differences in revenue and expenditures represent inequalities which are legitimate differences of choice and circumstance? At what point do these differences create inequities in educational quality and opportunity which must be addressed by the state? Citizens, political leaders, and educators must continue to wrestle with these questions.

The author extends appreciation to Rachelle Rickens Bonfield and Daniel Mesick for their assistance in compiling data for this study.

NOTES

1. Peter West, "Judge in Missouri Strikes the State's Finance Formula," Education Week, Jan. 27, 1993, 1,17.

2. Millicent Lawton, "School-Finance Laws Are Unconstitutional, N.D. Judge Decrees," Education Week, Feb. 17, 1993, 1, 21.

3. Sam Howe Verhovek, "Texas to Hold Referendum On School-Aid Shift to Poor," New York Times, Feb. 16, 1993, A12.

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6. William W. Cooley, "Inequalities and Inequities in Pennsylvania Public Schools," Pennsylvania Educational Policy Studies No. 2 (17 Nov. 1989), 6.

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10. Center for Rural Pennsylvania, 1.

11. Robert P. Casey, Governor, "Budget Address," Harrisburg, PA, Feb. 9, 1993, 10.

12. Pennsylvania Department of Education, Selected Expenditure Data for Pennsylvania Public Schools, 19XX-XY, and Selected Revenue Data and Equalized Mills for Pennsylvania Public Schools, 19XX-XY (Harrisburg: PDE, 19ZZ). Seven volumes were consulted for the following years and publication dates: 1984-85 (November 1986), 1985-86 (October 1988), 1986-87 (January 1989), 1987-88 (February 1990), 1988-89 (February 1991), 1989-90 (November 1991), 1990-91 (August 1992).

13. Walter R. Borg and Meredith D. Gall, Education Research: An Introduction, 5th ed. (New York: Longman, Inc., 1989), 544.

14. Fred N. Kerlinger, Foundations of Behavioral Research 2nd ed. (New York: Holt, Rinehart and Winston, Inc., 1973), 307.

15. See Allan R. Odden and Lawrence O. Picus, School Finance: A Policy Perspective (New York: McGraw-Hill, Inc., 1992), 66.

16. Odden and Picus, 65.

17. See table of district subsidy allocations in Information Legislative Service 31, no. 8 (February 19, 1993): 12-24.

GLOSSARY

All terms are defined as stated in publications of the Pennsylvania Department of Education except as noted herein.

Actual Instruction Expense (AIE) - Excludes from general fund expenditures those for health services, transportation, debt service, capital outlay, homebound instruction, community/junior college education programs and payments to area vocational-technical schools; deductions are also made for selected revenues and for other financing sources (see Section 2501 of the PA Public School Code).

Average Daily Membership - Aggregate number of school days for all children on active rolls divided by the number of days the school is in session.

Equalized Mills - A standardized millage calculated by dividing a school district's Local Revenue by its Market Value of real property multiplied by 1000. (Only Local Taxes are included in Local Revenue for this calculation by the Pennsylvania Department of Education.)

Federal Revenue - Revenue originating from the U.S. Government.

Local Revenue - The sum of Total Taxes and Local Other Revenue.

Market Value - Value of real estate in a school district as determined by the Pennsylvania State Tax Equalization Board; used in calculating a district's aid ratio.

State Revenue - Revenue originating from Commonwealth appropriations and directly disbursed to school districts.

Total Expenditures - Includes all general fund expenditures (Instruction [less tuition], Support Services, and Operation of Noninstructional Services) plus Facilities Acquisition and Other Financing Uses (less prior years' receipts and fund transfers).

Total Revenue - The sum of Local, State, and Federal Revenue; excludes revenue from the sale of bonds, proceeds from extended term financing, sale of or compensation for loss of fixed assets, and refunds of prior years' expenditures.

APPENDIX

COMPONENTS OF EQUALIZED SUBSIDY FOR BASIC EDUCATION

1. **BASE SUBSIDY**
   ON ACCOUNT OF INSTRUCTION

2. **ECONOMIC SUPPLEMENT**
   ON ACCOUNT OF
   CHILDREN IN LOW-INCOME FAMILIES

3. **ECONOMIC SUPPLEMENT**
   ON ACCOUNT OF LOCAL TAX EFFORT
   AND POPULATION PER SQUARE MILE

AUGMENTATIONS

1. **SMALL DISTRICT ASSISTANCE (1985)**

2. **LOW EXPENDITURE, LOW WEALTH SUPPLEMENT (1991)**

3. **LOW EXPENDITURE POVERTY SUPPLEMENT (1991)**

EQUALIZED SUBSIDY FOR BASIC EDUCATION
Payable 1991-92

The Equalized Subsidy for Basic Education (ESBE) was established by Act 73 of 1983 to distribute basic education subsidy beginning in the 1983-84 payable year. ESBE was altered slightly by Act 93 of 1984, by Act 31 of 1985, by Act 117 of 1986 by Act 50 of 1987, by Act 110 of 1988, by Act 43 of 1989, by Act 7A of 1990, and most recently by Act 25 of 1991. However, since its existence, ESBE has contained three primary components: a base subsidy on account of instruction, an economic supplement on account of pupils in low income families and an economic supplement on account of local tax effort and population per square mile. An augmentation to the subsidy system designed to provide additional assistance to small school districts was included in Act 31 of 1985, and a second augmentation called school supplement was added by Act 117 of 1986. This latter augmentation was eliminated by Act 50 of 1987, although the funds generated by it in 1986-87 were included in the prior year subsidy amount used for the calculation of ESBE in 1987-88. Act 25 of 1991 established two additional supplements. The low expenditure, low wealth supplement and the low expenditure poverty supplement each provide additional funds to qualifying districts. The components and other critical elements of the subsidy are summarized below.

Base Subsidy on Account of Instruction: The base payment is earned by all 501 school districts. It is calculated by multiplying the number of students in weighted average daily membership (WADM) by a district's market value/personal income aid ratio and by the Factor for Educational Expense (FEE). Act 25 of 1991 set the FEE at $2,550.

Economic Supplement on Account of Children in Low Income Families: This supplement is earned by all school districts in which at least eight percent of the pupils in average daily membership (ADM) are children aged five to seventeen years from families receiving Aid to Families with Dependent Children (AFDC) payments of $2,000 or more per year. The amount of the supplement is based upon the percent of ADM receiving AFDC. If 8-14.9 percent of the ADM receives AFDC, the supplement is 6 percent of the FEE ($153 for the 1991-92 payable year) per AFDC. If 15-19.9 percent of the ADM receives AFDC, the supplement is 16 percent of the FEE ($408 for the 1991-92 payable year) per AFDC. If 20-29.9 percent of the ADM receives AFDC, the supplement is 23 percent of the FEE ($587 for the 1991-92 payable year) per AFDC. If 30 percent or more of the ADM receives AFDC, the supplement is 27 percent of the FEE ($689 for the 1991-92 payable year) per AFDC.

Economic Supplement on Account of Local Tax Effort and Population Per Square Mile: Any school district levying local taxes equal to or in excess of the statewide median tax effort, as measured by the state median equalized mills on market value (state median 21.1 mills for the 1991-92 payable year), qualifies for this supplement. Act 25 of 1991 changed the calculation of the district equalized mill by using data for the year prior to the reimbursable year. In addition, any school district with 50 percent or more of its population residing in a city of the first through third class which levies and collects local taxes for municipal purposes in excess of the statewide median tax effort, as measured by the state municipal median equalized mills on market value (estimated state median 18.2 for the 1991-92 payable year), qualifies for this supplement. Qualifying districts with a population per square mile of fewer than 4,000 persons receive a supplement equal to one percent of their actual instruction expense. Qualifying districts with a population per square mile of 4,000-5,949 persons receive a supplement equal to three percent of their actual instruction expense. Qualifying

districts with a population per square mile of 5,950 or more persons receive a supplement equal to five percent of their actual instruction expense.

There are three exceptions to these general categories. First, qualifying districts with a population per square mile of fewer than 4,000 persons which include a central city of a Standard Metropolitan Statistical Area (SMSA) receive a supplement equal to three percent of their actual instruction expense. Second, qualifying districts with a population per square mile of 5,950 or more persons and a student population in excess of 35,000 WADM receive a supplement equal to 19 percent of their actual instruction expense. Third, qualifying districts which include a central city of an SMSA which have an equalized mill greater than the median equalized mill by at least 10.29 and have an estimated 1990-91 WADM that is at least 200 less than the actual 1989-90 WADM receive an additional two percent of their actual instruction expense.

Unadjusted Allocation: A district's unadjusted allocation as generated by this formula is equal to its base subsidy on account of instruction plus its economic supplement on account of children in low income families plus its economic supplement on account of local tax effort and population per square mile.

Minimum Guarantee Allocation: For payments in 1991-92, Act 43 of 1989 stipulates that no district will receive an ESBE amount less than a two percent increase over the amount received in 1990-91.

Small District Assistance: Any school district with a market value/personal income aid ratio of .5000 or greater and average daily membership (ADM) of 1,500 or fewer or any school district that received small district assistance in 1990-91 qualifies for this assistance in 1991-92. Act 25 of 1991 set the rate for qualifying districts with a population per square mile of 90 or greater at $170 per ADM and the rate for qualifying districts with a population per square mile of less than 90 at $190 per ADM. This allocation is not subject to the minimum guarantee.

Low Expenditure, Low Wealth Supplement: Any school district with a market value/personal income aid ratio of .6000 or greater and an actual instruction expense per weighted average daily membership (AIE/WADM) for the school year prior to the reimbursable year which is less than the state median AIE/WADM ($3,261 for 1989-90 school year) qualifies for this supplement. Qualifying districts receive an amount equal to 1.3 percent of their AIE for the reimbursable year. However, the supplement is capped at the dollar amount necessary to raise the district AIE/WADM for the year prior to the reimbursable year to the state median AIE/WADM for that year. This allocation is not subject to the minimum guarantee.

Low Expenditure Poverty Supplement: Any school district with an AIE/WADM for the year prior to the reimbursable year of less than $3,445 and with ten percent or more of its ADM from low income families qualifies for this supplement. Qualifying districts receive an amount equal to 0.5 percent of their AIE for the reimbursable year. This allocation is not subject to the minimum guarantee.

Payments: ESBE is paid to school districts six times during the year. The first five payments are each 15 percent of the estimated net subsidy and are made on the last Thursday of August, October, December, February and April. The balance due is paid on June 1.

PROPORTION OF 1991-92 BUDGET AMOUNTS

ESBE APPROPRIATION **$2,945,803,000**

TOTAL BUDGET **$13.9 Billion** **(ESBE is 21.2%)**

TOTAL EDUCATION FUNDING
$ 6.2 Billion **(ESBE is 47.3%)**

TOTAL BASIC EDUCATION FUNDING
$ 5.1 Billion **(ESBE is 58.0%)**

Equalized Subsidy for Basic Education

HISTORY OF PARAMETERS

Payable Year	FEE	Minimum Increase	Maximum Increase	Level of Guarantee
1983-84	$1656	2%	9%	---
1984-85	$1656	2%	7.45%	80%
*	$1725	3%	8%	---
1985-86	$1875	2%	8.45%	80%
1986-87	$1970	2%	7%	85%
1987-88	$2125	2%	8%	90%
1988-89	$2230	2%	8%	95%
1989-90	$2330	2%	---	100%
1990-91	$2380	2%	---	100%
1991-92	$2550	2%	---	100%
1992-93	$2655	2%	---	100%

* For districts providing a TELLS remediation program